Zanclognatha martha (Pine Barrens Zanclognatha)

Report Date: January 13, 2016

Priority 1 Species of Greatest Conservation Need (SGCN)

Class: Insecta (Insects)

Order: Lepidoptera (Butterflies, Skippers, And Moths)

Family: Noctuidae (Noctuid Moths)

General comments:

Extant at 3 sites in ME; community endemic of pitch pine/pitch pine-scrub oak barrens, which are rare in ME; not found at 4 of 7 barrens to date, with moderate survey effort

Species Conservation Range Maps for Pine Barrens Zanclognatha:

Town Map: Zanclognatha martha_Towns.pdf
Subwatershed Map: Zanclognatha martha_HUC12.pdf

SGCN Priority Ranking - Designation Criteria:

Risk of Extirpation:

Maine Status: Threatened

State Special Concern or NMFS Species of Concern: NA

Recent Significant Declines: NA

Regional Endemic:

Zanclognatha martha's global geographic range is at least 90% contained within the area defined by USFWS Region 5, the Canadian Maritime Provinces, and southeastern Quebec (south of the St. Lawrence River).

High Regional Conservation Priority: NA High Climate Change Vulnerability: NA

Understudied rare taxa:

Recently documented or poorly surveyed rare species for which risk of extirpation is potentially high (e.g. few known occurrences) but insufficient data exist to conclusively assess distribution and status. *criteria only qualifies for Priority 3 level SGCN*

Notes:

Historical: NA

Culturally Significant: NA

Habitats Assigned to Pine Barrens Zanclognatha:

Formation Name Northeastern Upland Forest

Macrogroup Name Central Oak-Pine

Habitat System Name: Northeastern Interior Pine Barrens **Primary Habitat** Notes: pine barren obligate

Stressors Assigned to Pine Barrens Zanclognatha:

Stressor Priority Level based on Severity and Actionability

	Moderate Severity	High Severity
Highly Actionable	Medium-High	High
Moderately Actionable	Medium	Medium-High
Actionable with Difficulty	Low	Low

IUCN Level 1 Threat Natural Systems Modifications

IUCN Level 2 Threat: Fire and Fire Suppression

Severity: Severe Actionability: Moderately actionable

Notes: Pine barren habitat is fire dependent - fire suppression can alter successional stage and habitat availability over

time; fire can cause direct mortality

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IUCN Level 1 Threat Other Options

IUCN Level 2 Threat: Lack of knowledge

Severity: Moderate Severity **Actionability:** Highly actionable

Notes: Lack of comprehensive survey effort and monitoring to identify additional occurrences and status/trends of

individual populations

IUCN Level 1 Threat Pollution

IUCN Level 2 Threat: Agricultural and Forestry Effluents

Severity: Moderate Severity **Actionability:** Highly actionable

Notes: Nontarget species impacts from aerial pesticide spraying, epsecially gypsy moth control in southern ME

IUCN Level 1 Threat Residential and Commercial Development

IUCN Level 2 Threat: Housing and Urban Areas

Severity: Severe Actionability: Moderately actionable

Notes: Habitat loss and fragmentation; pine barren habitat is prime land for development in southern ME

IUCN Level 1 Threat Agriculture and Aquaculture

IUCN Level 2 Threat: Annual and Perennial Non-timber crops

Severity: Moderate Severity **Actionability:** Moderately actionable **Notes:** Some barrens are being converted to intensive blueberry production

IUCN Level 1 Threat Energy Production and Mining

IUCN Level 2 Threat: Mining and Quarrying

Severity: Moderate Severity **Actionability:** Moderately actionable

Notes: Habitat loss (e.g., sand and gravel extraction)

IUCN Level 1 Threat Residential and Commercial Development

IUCN Level 2 Threat: Commercial and Industrial Areas

Severity: Moderate Severity Actionability: Moderately actionable

Notes: Habitat loss and fragmentation; pine barren habitat is prime land for development in southern ME

IUCN Level 1 Threat Transportation and Service Corridors

IUCN Level 2 Threat: Roads and Railroads

Severity: Moderate Severity Actionability: Moderately actionable

Notes: Habitat loss and fragmentation; pine barren habitat is prime land for development in southern ME

Species Level Conservation Actions Assigned to Pine Barrens Zanclognatha:

*Only species specific conservation actions that address high (red) or medium-high (orange) priority stressors are summarized here.

Conservation Action Category: Survey and Monitoring Biological Priority: high Type: new

Develop and implement a systematic protocol for monitoring population size, demographics, and trends.

Stressor(s) Addressed By This Conservation Action

Lack of knowledge

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Conservation Actions Associated with the Dry Barrens Lepidoptera Guild:

Conservation Action Category: Species Management Biological Priority: critical Type: new

Prepare occurrence maps and pesticide spray consultation guidelines for rare Lepidoptera and distribute to strategic partners

including Maine Bureau of Pesticides Control.

Stressor(s) Addressed By This Conservation Action

Agricultural and Forestry Effluents

Conservation Action Category: Habitat Management

Biological Priority: critical

Type: new

Report Date: January 13, 2016

Conduct a statewide review of potential high quality barrens habitat that is threatened by succession and identify strategic habitat restoration actions for implementation by key conservation partners.

Stressor(s) Addressed By This Conservation Action

Fire and Fire Suppression

Broad Taxonomic Group Conservation Actions:

Additional relevant conservation actions for this species are assigned within broader taxonomic groups in Maine's 2015 Wildlife Action Plan: Element 4, Table 4-1.

Habitat Based Conservation Actions:

Additional conservation actions that may benefit habitat(s) associated with this species can be found in Maine's 2015 Wildlife Action Plan: Element 4, Table 4-15. Click on the Habitat Grouping of interest to launch a habitat based report summarizing relevant conservation actions and associated SGCN.

The Wildlife Action Plan was developed through a lengthy participatory process with state agencies, targeted conservation partners, and the general public. The Plan is non-regulatory. The species, stressors, and voluntary conservation actions identified in the Plan complement, but do not replace, existing work programs and priorities by state agencies and partners.